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08/704,400	08/27/1996	RENATE M. SOMBROEK	PHN14.491A	9135

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EXAMINER	
BRIER, JEFFERY A	
ART UNIT	**PAPER NUMBER**
2672	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 08/704,400	Applicant(s) SOMBROEK ET AL.	
	Examiner Jeffery A. Brier	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-7,9 and 12-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-7, 9, and 12-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Prosecution Application

1. The request filed on 09/26/01 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 08/704,400 is acceptable and a CPA has been established. An action on the CPA follows.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The name given to applicants user interface 106 in the claims, "a single direction-manipulator", is not present in the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

4. Claim 17 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 17 claims:

The system of claim 16, wherein the at least one sensor comprises a plurality of force z detectors.

The sensors described in applicants originally filed specification were not described as force z detectors. At page 6 line 30 to page 7 line 9 applicant described

user interface means as having force sensing resistors. Force sensing resistors are not the same as force z detectors.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> **A person shall be entitled to a patent unless –**
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-15 and 3-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato, Japanese Patent application publication no. 1-200285. These new claims and amended claims are broader than the claims reviewed by the U. S. Patent Board of Appeals. An analysis of these claims and Kato follows.

Claim 12:

Kato teaches a cursor control system comprising (cursor keys and computer): user-interface means (cursor keys-it is noted that applicants specification defined the user interface means 106 as a maneuvering device e.g. joystick at page 4 line 14, and the specification defines user interface means at page 1 lines 24-28 as a plurality of buttons, a joystick, or a single thumb operated button) for supplying, responsive to user manipulation of a single direction-manipulator (since applicants defines the user interface means as single device with a plurality of buttons then Kato's cursor keys are a single direction-manipulator), signals representative of at least a desired direction of

cursor motion, which a desired direction simultaneously includes both a desired vertical component and a desired horizontal component with respect to the cursor as displayed; and at least one processing means (Kato figure 2 described on pages 4 and 5 of the translation) for interpreting and acting on the signals, the processing means being adapted to perform at least the following operations: using displacement of the cursor at a first speed relative to the display during a predetermined time interval after activation of the user-interface means by the user (Kato causes the cursor to travel at a low speed for an initial period of time); and causing displacement of the cursor at a second speed relative to the display after the predetermined time interval has elapsed (Kato increases the speed of the cursor after the initial period of time has elapsed), whereby a desired cursor motion in the desired direction is achieved ergonomically (Kato is ergonomic because the cursor has been moved to a desired location with less effort exerted by the user, furthermore applicant at page 2 lines 20-24 defines the ergonomic nature of applicants invention as the ability to quickly and accurately position a cursor).

Claim 13:

This claim is similar to claim 12. The difference being claim 13 is directed to user interface apparatus while claim 12 was directed to a system comprising a user interface means. Kato teaches a user interface apparatus (Kato's cursor keys and computer) for use in a cursor control system, the apparatus comprising (Kato's apparatus comprises cursor keys and a software routine): a single direction manipulator -responsive to user manipulation- for specifying a desired direction of cursor motion, which desired direction

simultaneously includes both a desired vertical component and a desired horizontal component with respect to the cursor as displayed; and means for supplying signals representative of the desired direction and a desired speed (Kato's software routine illustrated in figure 2), the signals representing a first speed relative to the display during a predetermined time interval after activation of the direction manipulator by the user (Kato causes the cursor to travel at a low speed for an initial period of time by generating signals which represent slow speed-YES output of step A5); and a second speed relative to the display after the predetermined time interval has elapsed(Kato increases the speed of the cursor after the initial period of time has elapsed-YES output of step A8), whereby a desired cursor motion in the desired direction is achieved ergonomically (Kato is ergonomic because the cursor has been moved to a desired location with less effort exerted by the user, furthermore applicant at page 2 lines 20-24 defines the ergonomic nature of applicants invention as the ability to quickly and accurately position a cursor).

Claim 14:

Kato teaches the apparatus of claim 13, wherein: the first speed is a relatively low speed and the second speed is a relatively high speed (see page 7 last paragraph of the translation); and the user-interface means and/or the processing means is operative to render at least a relatively low speed or the relatively high speed variable in response to the user manipulating the direction-manipulator.

Claim 15:

Kato teaches the apparatus of claim 13, wherein the processing means or the user-interface means is provided with respective counting means to count the number of events elapsed since the user interface means was last activated (step A5 is a counting means).

Claim 3:

Kato teaches the system of claim 12, wherein data transmission from the user-interface means to the processing means involves a temporal basis in terms of repetitive events (the signals generated by continuous depression of a cursor key creates a data stream formed of repetitive electrical pulses), and wherein the processing means or the user interface means is operative to measure the predetermined time interval in terms of the number of events (counter A5 counts the repetitive electrical pulses representing continuous depression of the cursor key).

Claim 4:

Kato teaches the system of Claim 3, wherein the first speed is a relatively low speed and the second speed is a relatively high speed; a respective one of the respective events involves a respective update of a cursor position (the electrical signals generated by depression of the cursor key indicates an update to cursor position), the relatively low speed is effected by a relatively short displacement of the

cursor per update, and the relatively high speed is effected by a relatively large displacement of the cursor per update.

Claim 5:

Kato teaches the system of claim 12, wherein the first speed is a relatively low speed and the second speed is a relatively high speed; and the user-interface means or the processing means is operative to render at least the relatively low speed or the relatively high speed variable in response to the user manipulating the direction-manipulator (in response to the user pressing a cursor control key a low cursor speed occurs and then after a predetermine time count Ti a high cursor speed occurs).

Claim 6:

Kato teaches the system of claim 3, wherein the processing means or the user-interface means is provided with a respective counting means to count the number of events elapsed since the user-interface s was last activated (Kato, figure 2, step A5).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> **(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.**

8. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, Japanese Patent application publication no. 1-200285 in view of applicants admission of the prior art that CD-I systems were widely known, see page 1 lines 9-13 of applicants specification.

Claim 7:

Claim 7 claims A CD-I system, comprising the system of claim 12. Kato and claim 12 have been discussed above. Kato does not discuss the CD-I system. However, the CD-I is a computer like system and Kato teaches a computer system. It would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify the user interface means of the CD-I system to have the features Kato's user interface means since the CD-I system is a computer system.

Claim 9:

Claim 9 claims A CD-I system, comprising the system of claim 3. Kato and claims 12 and 3 have been discussed above. Kato does not discuss the CD-I system. However, the CD-I is a computer like system and Kato teaches a computer system. It would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify the user interface means of the CD-I system to have the features Kato's user interface means since the CD-I system is a computer system.

9. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato, Japanese Patent application publication no. 1-200285, as applied to claim 12 above, and further in view of Levine, European Patent Application publication no. 0 062 133.

Claim 16 claims: The system of claim 12, wherein the user interface means comprises: at least one sensor for supplying at least one cursor motion specification signal, responsive to the user manipulation, means for increasing a voltage as a function of time, responsive to the cursor motion specification signal, and means for triggering an output signal when the voltage reaches a given level. Kato does not teach the claimed means for increasing a voltage as a function of time, responsive to the cursor motion specification signal, and the claimed means for triggering an output signal when the voltage reaches a given level. Levine teaches with reference to figures 1 and 2 at least one sensor (1-3) used to control a cursor (page 1 paragraph 1) means for increasing voltage (figure 1) and a means for triggering an output signal (voltage slope D in signal Vc after point C) when the voltage reaches a given level (point C of figure 2). It would have been obvious obvious to one of ordinary skill in the art at the time of applicants invention to modify Kato to include Levine's circuit because this circuit reduces the speed of the cursor (moving the cursor back in essence decreases the speed of the cursor).

Claim 17 claims: The system of claim 16, wherein the at least one sensor comprises a plurality of force z detectors. Kato teaches cursor keys where each one has at least one switch which is activated when the user has applied enough pressure

to activate the switch. This is in effect a force z detector since cursor keys are usually horizontal and the force needed to depress the key is applied in the z direction. Thus, a plurality of force z detectors would have been obvious obvious to one of ordinary skill in the art at the time of applicants invention.

Response to Arguments

10. Applicant's arguments filed 09/26/01 have been fully considered but they are not persuasive. The arguments concerning Kato are addressed below.

On page 5 last paragraph applicant argues that the claimed limitations *single direction-manipulator* and where *a desired direction simultaneously includes both a desired vertical component and a desired horizontal component* excludes cursor keys. This argument is not persuasive because the user interface means 106 was defined by applicant as including buttons similar to cursor keys (applicant specification at page 1 lines 24-28 and page 4 line 14. Thus the single direction-manipulator 106 has in one embodiment buttons which function a cursor keys.

On page 6 applicant argues that cursor keys such as those discussed in the Kato reference, are not very ergonomic. This argument is not persuasive because ergonomic was defined by applicant at page 2 lines 20-24 of the specification as relating to the ability to quickly and accurately position a cursor and did not discuss which type of user interface means is more ergonomic. In fact to use the keyboard cursor keys to move a cursor is often easier than using the mouse

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A. Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jeffery A Brier
Primary Examiner
Art Unit 2672